# Chapter 13 Psychotherapeutic Treatment Approaches for Suicidal Individuals

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**Abstract** In the past 20 years, rigorous empirical study has shown that Dialectical Behavior Therapy (DBT) and Cognitive-Behavioral Therapy (CBT) treatment approaches for suicide prevention work to reduce recurrent suicidal behavior among high suicide-risk groups. In addition, very brief psychotherapeutic approaches comprised of supportive contact post-discharge and/or CBT techniques have been developed and tested. These interventions aim to increase safety among the many acutely suicidal individuals who present to acute care settings but will not engage in follow-up mental healthcare. This chapter outlines both long-term and very brief psychotherapeutic interventions to prevent suicide, as well as the evidence base for these treatments. Additionally, one promising mindfulness-based approach to suicide prevention (MBCT-S) is also detailed. Proposed directions for future research include more rigorous testing of MBCT-S and the proposal and testing of treatment targets so existing treatments may be refined and new treatments can be efficiently developed.

#### 13.1 Introduction

Suicide is a leading cause of death. In the U.S., more than 38,000 individuals died by suicide in 2010 (National Center for Injury Prevention and Control 2012). Worldwide, almost one million people die by suicide each year (World Health Organization 2012). Suicide attempts in the U.S. occur at rates up to 25 times higher than suicides (Goldsmith et al. 2002). Given the incidence and prevalence of suicide and

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M.S. Chesin · S. Chaudhury · B. Stanley Molecular Imaging and Neuropathology Division, New York State Psychiatric Institute, 1051 Riverside Drive, Unit 42, New York, NY 10032, USA suicide attempt, identifying interventions to prevent suicidal behavior in individuals identified as at risk is imperative. However, designing and testing such interventions is challenging for several reasons: (1) There are ethical concerns to consider when offering novel treatment to some but not all individuals at acute risk for suicidal behavior, e.g., when randomizing high suicide-risk patients to enhanced treatment or treatment as usual (TAU). (2) Pinpointing efficacious treatments is difficult given the nature of the primary outcomes in suicide intervention research. That is, when suicidal ideation and suicide attempts are the primary outcomes of interest, natural regression to the mean and the low incidence of suicide-related events, limit power to detect pre- to postôtreatment gains. (3) Suicidal patients are a heterogeneous group (Carballo et al. 2008), posing a challenge to identifying what works and what works for whom among the different types of suicide attempters and completers.

Despite such difficulties, several psychotherapeutic treatments to prevent suicide and suicide-related behavior are available and empirically supported. In this chapter, we provide a comprehensive review of multi-session psychotherapeutic treatments to prevent suicidal behavior among high suicide-risk groups, and we summarize the most promising very brief (i.e., one session) interventions for suicidal patients that are begun or even completed at the time and place where suicidal individuals present for help (e.g., emergency departments). Our review is focused on describing treatments for suicidal adults and adolescents and the evidence base. We also suggest directions for future research, highlighting the need for research that could lead to the refinement of available psychotherapeutic treatments for suicidal behavior and the development of additional brief interventions.

#### 13.2 Longer-Term Treatments for Suicidal Behavior

#### 13.2.1 Dialectical Behavioral Therapy

Dialectical Behavioral Therapy (DBT) (Linehan 1993) combines change strategies and techniques from behavioral treatments with acceptance-based strategies and techniques. DBT was originally designed as a treatment for individuals who chronically engage in suicidal and self-injurious behaviors (Linehan 1987). Because chronic non-suicidal self-injury, defined as the intentional, direct destruction of one's own body tissue without any conscious intent to die (Favazza 1998; Linehan 1987), and repetitive suicidal behavior occur frequently in Borderline Personality Disorder (BPD) (Association 2000; Jacobson and Gould 2007), DBT was quickly considered and tested as a treatment for BPD. Thus, most of the evidence for using DBT to treat suicidal behavior comes from studies testing DBT to treat self-inflicted injury with and/or without suicidal intent, among BPD patients, and DBT is manualized as a treatment for individuals with BPD (Linehan 1987).

Findings from eight randomized controlled trials (RCTs) conducted by six different groups (Carter et al. 2010; Clarkin et al. 2007; Koons et al. 2001; Linehan

et al. 1991, 1999, 2006; McMain et al. 2009; Pistorello et al. 2012; Verheul et al. 2003) consistently show that DBT is an effective and efficacious treatment for self-injury and suicidal behavior among individuals with BPD. When compared to TAU, patients who have received DBT show greater reductions in suicidal ideation (Koons et al. 2001; Pistorello et al. 2012). When DBT is compared to active treatments, its efficacy as a psychotherapeutic intervention for suicidal behavior is even more compelling. Compared to treatment by experts and supportive psychotherapy, DBT is more effective in reducing reattempt risk and current suicidality (Clarkin et al. 2007; Linehan et al. 2006; Turner 2000). DBT is similarly effective in reducing suicidality and recurrent suicidal behavior as general psychiatric management plus psychodynamic psychotherapy (Clarkin et al. 2007; McMain et al. 2009). Panos et al. (2013) conducted a meta-analysis of five of the above RCTs and concluded that DBT is moderately more effective in reducing suicidal behavior and non-suicidal self-injury than other treatments, including TAU, supportive psychotherapy or manualized psychodynamic, or client centered therapy.

Furthermore, the reduction in suicidal behavior as a result of DBT appears to persist posttreatment. Linehan et al. (2006) in the aforementioned trial found that participants who received DBT were also less likely to make a suicide attempt during the year following treatment than those receiving treatment by experts. Similarly, McMain et al. (2012) found that the reduction of suicidal and non-suicidal self-injurious behaviors in participants who received either DBT or psychopharmacological treatment persisted for 2-years following treatment.

#### 13.2.2 Cognitive Therapy to Prevent Suicide Attempts

Cognitive Therapy (CT) for the prevention of suicide attempts (Brown et al. 2002) is another treatment with empirical support for the prevention of suicide attempt. CT is based on cognitive theory, which posits that the manner in which an individual thinks about and interprets situations determines the emotional and behavioral response to said situation (Beck 1976). Thus, CT focuses on changing maladaptive thought patterns, including those of hopelessness and helplessness, that lead to suicidal behavior. The 10-session intervention is divided into three phases. During the first three sessions, the focus is on treatment engagement, orientation to the cognitive model, and identification of target problems and treatment goals. During the next four sessions, suicidal behavior is targeted through cognitive restructuring and behavioral change and includes such interventions as coping cards and hope kits. The final three sessions focus is on relapse prevention, during which guided imagery is used to help the patient understand the index suicide attempt as well as likely triggers and components of a future suicidal crisis, with an emphasis on using skills acquired during the treatment to avoid acting on a suicidal urge (Berk et al. 2004).

Brown et al. (2005) conducted a RCT of CT versus enhanced usual care (enhanced TAU). One hundred twenty recent suicide attempters were assigned to either CT or enhanced TAU and were followed for 18 months following the 10-

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session CT intervention. Individuals in the CT group had significantly fewer suicide attempts than those in the usual care group. In fact, they were half as likely to attempt suicide in the follow-up period than their counterparts. Though Brown et al. (2005) provided the largest and most rigorous test of CT to prevent suicide attempt, prior tests of 5 to 10-session CT-based approaches to prevent the recurrence of suicide attempt have been similarly promising, showing reductions in suicidal ideation and trends toward lower incidence of suicide attempt among participants receiving CT but not TAU.

### 13.2.3 Mindfulness-Based Cognitive Therapy to Prevent Suicide

We (Latorre et al. n.d.) recently combined and adapted Mindfulness-Based Cognitive Therapy (MBCT; Segal et al. 2002, 2013) with the Safety Planning Intervention (SPI; Stanley and Brown 2008, 2012) to treat outpatients who present with current suicidal thoughts and recent suicide-related behavior despite ongoing pharmacotherapy and Veterans transitioning to outpatient treatment post-hospitalization for suicide-related concerns. MBCT is an 8-week group treatment that includes mindfulness training and some CT techniques, namely psychoeducation about depressive symptoms and relapse prevention planning. SPI, described below, is a one-session CT-based intervention focused on identifying individual warning signs and internal and external resources for managing suicidal crisis. Patients leave with a written individualized crisis survival plan for reference when suicidal thoughts and urges reemerge.

MBCT was originally designed to address the cognitive reactivity, or the onset of biased thinking subsequent to mild mood deterioration (Teasdale and Dent 1987), that makes individuals with a history of recurrent depression vulnerable to depressive relapse (Teasdale et al. 2000). In MBCT, individuals practice, through repeated in-class experiential exercises and home meditations, relating to experience with awareness, nonjudgment and non-reactivity, i.e., mindfully. In this manner, ruminative responding is impeded, or at least, identified. Mindfulness training proceeds by first, i.e., during weeks one to four, increasing attention and awareness of internal experience, including feelings, thoughts, and body sensations. Then, in the second half of MBCT, improved focus, awareness and non-reactivity to difficult feelings and thoughts, and open-monitoring of experience is attempted (Segal et al. 2013). CT techniques include psychoeducation about depression, symptoms of depression and depressogenic cognitions as well as discussion of the cognitive model of depression, and relapse prevention planning (Segal et al. 2013). CT techniques complement the mindfulness training. They serve to increase awareness of experience as opposed to change it, as in traditional CT.

Given known deficits in cognitive control among suicide attempters (Keilp et al. 2013), we thought to adapt and test MBCT-S as an add-on treatment to prevent

recurrent suicide attempt among individuals at acute suicide risk. Our rationale for developing and testing MBCT-S was also bolstered by: 1. additional overlap between other mechanisms of treatment gains in MBCT and deficits specific to suicide attempters, namely blunted physiological arousal in response to social stress (Chesin et al. 2014, for a review); 2. studies showing MBCT is effective in the treatment of acute depression (Hofmann et al. 2010), and 3. studies showing slightly adapted MBCT was well-tolerated and effective for preventing depressive relapse among remitted individuals with a past suicide attempt (Barnhofer et al. 2009; Williams et al. 2013).

Adaptations to the MBCT curriculum in MBCT-S include identifying warning signs for suicide and crisis coping skills early in treatment using SPI and systematically working with suicide-related concerns and suicidal thoughts and behavior with mindfulness and CT exercises throughout treatment. To date, data from a few pilot trials (Chesin et al. 2014) suggest MBCT-S is feasible, acceptable, and helpful to outpatients and Veterans with recent suicidal behavior and current suicidal ideation.

## 13.2.4 A CT Intervention for Suicidal Children and Adolescents: Cognitive Behavior Therapy for Suicide Prevention

Adolescents have been found to be at significant risk for suicidal behavior (Ting et al. 2012). To address the need for a targeted intervention for suicidal behavior in adolescence, Cognitive Behavior Therapy for Suicide Prevention (CBT-SP) was developed and manualized for adolescent suicide attempters, though its authors suggest that is can also be used for adolescents who experience acute suicidal ideation (Stanley et al. 2009). CBT-SP is based on a stress-diathesis model of suicidal behavior (Mann et al. 1999) where stressors, such as interpersonal conflicts or academic difficulties, may trigger a suicidal crisis in an individual who possesses a diathesis (e.g., sex, gender, genetic predisposition) for suicidal behavior. The therapist and patient work collaboratively in this treatment to identify treatment strategies specifically tailored to the patient's proximal risk factors and stressors.

CBT-SP is divided into an acute phase and a continuation phase. During the acute phase, the patient is seen for 12–16 weekly sessions, and treatment consists of mostly individual sessions and up to six family sessions. The initial phase of acute treatment involves the following: (1) a chain analysis of the index suicide attempt; (2) safety planning; (3) psychoeducation; (4) identifying reasons for living; and (5) case conceptualization. During the middle phase of treatment, behavioral and cognitive skills are taught during individual and family therapy sessions. The final phase of acute treatment focuses on relapse prevention. During the continuation phase, the patient is seen for up to six more sessions over the course of 12 weeks. In these sessions, the focus is on generalizing the use of skills. Stanley et al. (2009)

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found that CBT-SP participants found the intervention to be acceptable and helpful. Further, 86 % of adolescent participants reported that they would recommend the intervention to a friend.

#### 13.3 Brief Interventions

Despite the promise of longer-term psychotherapeutic treatment approaches to suicidal behavior, the majority of suicidal individuals do not seek or maintain in outpatient or voluntary mental health treatment (see Lizardi and Stanley (2010) for a review; Hamdi et al. (2008)). Thus, some very brief crisis interventions have been designed to address and prevent the recurrence of suicidal behavior among patients presenting with suicidal ideation or behavior. Such interventions require at most one face-to-face individual session and can be delivered by professionals or trained paraprofessionals. These brief interventions help clinicians meet some needs of suicidal patients and attend to their legal and professional duties (American Psychiatric 2003) while respecting limits to patient willingness and ability to engage in and sometimes pay for longer-term treatment.

Brief interventions to prevent suicidal behavior can be broadly categorized into contact- and CT-based interventions. Most have been implemented and tested among patients presenting with suicidal behavior to acute care settings.

#### 13.4 Contact Interventions

Motto and Bostrom (Motto 2001) developed a stand-alone, low-level contact intervention for individuals at high risk for suicide. Specifically, patients who refused treatment following an inpatient hospitalization for suicidal behavior or depression were sent up to 24 personalized and unique letters from inpatient staff for a period of 5 years. The letters were brief and simply offered well wishes and the opportunity for the patient to respond, if he or she felt so inclined. In a RCT, Motto and Bostrom (2001) found that the patient group who received this brief, cost-effective contact intervention had significantly lower rates of suicide for 2 years post-discharge compared to a control group who received no further follow-up contact.

Subsequent studies have not found as robust results for a contact intervention. Carter et al. (2005) tested a contact intervention where patients who presented to an emergency department for self-poisoning, regardless of suicidal intent, were sent monthly and then bi-monthly postcards for 1 year. They found that this intervention significantly reduced the incidence of self-harm behaviors. However, the proportion of individuals reengaging in self-harm behavior did not differ between those in the intervention and control groups. Beautrais et al. (2010), meanwhile, found that differences in rates of acute care visits for self-harm behaviors did not differ

between those who received a contact intervention and those who did not once the number of visits for self-harm behaviors in the year prior to the index event was considered. They concluded that the contact intervention may only be efficacious for a subset of individuals who engage in suicidal behavior.

Despite these mixed findings, contact interventions continue to be implemented and tested internationally. Chen et al. (2010) developed an intervention where individuals who were seen in an emergency department or inpatient unit for self-harm behaviors received weekly supportive text messages. This intervention was found to be acceptable and was perceived to be helpful by participants. Fleischmann et al. (2008) conducted a multinational RCT of a combined intervention that consisted of a 1-hour psychoeducational session prior to discharge from the ED and brief follow-up contacts. The psychoeducational session focused on identifying risk factors and coping skills to manage suicidal urges. The authors found that suicide attempters who received the combined intervention were significantly less likely to commit suicide during an 18-month follow-up period.

#### 13.5 CT-Based Brief Interventions

Safety Planning Intervention (SPI; Stanley and Brown 2008, 2012) is a very brief (20–45 min) manualized, single session intervention developed from evidence-based CT strategies. This intervention was developed as a stand-alone intervention for patients who present for suicidal behavior at acute care settings and remain at some suicide risk at discharge. In SPI, the patient and clinician collaboratively develop a written, customized safety plan that is given to the patient at the end of the session for patient reference in future crises. This written, personalized plan focuses on increasing the patient's crisis survival skills and restricting access to means for suicide.

The written safety plan includes six strategies for reducing suicide risk and lists (1) crisis warning sign; (2) internal coping strategies/distraction techniques; (3) social distractions; (4) friends and family members who can be called for help; (5) a personalized list of mental health professionals/agencies; and (6) a plan for restricting access to means for suicide. The first step of the SPI, identifying warning signs, is done alongside a thorough understanding of the index suicide event. Warning signs can be thoughts, feelings, behaviors, images, events, or situations and identifying specific, personal warning signs are emphasized. The next four steps include individual internal and external resources to manage suicidal crises. These steps are presented in a hierarchical fashion such that internal resources are presented before external resources (e.g., friends who may distract and friends, family, and professionals who may help in crisis). Thus, self-efficacy in the management of suicidal urges is encouraged. Patients are, however, specifically instructed to bypass the initial steps and reach out for help if they feel they are at imminent risk for suicide (Stanley and Brown 2012). SPI has been implemented in a variety of acute care settings, including many emergency departments nationwide.

The intervention has been found to be acceptable and helpful in managing suicidal urges by both staff and patients at moderate risk for suicidal behavior (AAS meeting 2013). SPI has been identified as a best practice by the American Foundation for Suicide Prevention and the Suicide Prevention Resource Center Registry for Suicide Prevention (www.sprc.org).

Several other brief crisis interventions exist, primarily focusing on psychoeducation (King et al. 2009; Kruesi et al. 1999; McManus et al. 1997) and treatment engagement (Rotheram-Borus et al. 2000) For example, "Means Restriction Education" (Kruesi et al. 1995) is a brief, stand-alone intervention for children and adolescents who are seen in EDs for psychiatric concerns. The intervention involves informing parents of their child's suicide risk, providing psychoeducation on how means restriction can reduce this risk, and developing a plan to limit access to lethal means in their home. The authors found that the intervention was useful in improving parental restriction of various lethal means, including firearms, prescription drugs, and over- the-counter medications, at 2 months follow-up (Kruesi et al. 1999). Rotheram-Borus et al. (1996) developed an intervention for adolescent female suicide attempters who presented to an emergency department. The "specialized emergency department care" intervention included three key components: (1) staff education; (2) a 20-min orientation video introducing the ED and its practices and emphasizing the importance of follow-up treatment; and (3) a structured family session to address management of future suicidal crises and to gain commitment to aftercare. Researchers found that those who received the specialized ED care intervention were significantly more likely to engage in outpatient psychotherapy, and trended toward attending more sessions and completing the full course of psychotherapy, compared to those who received TAU in the ED (Rotheram-Borus et al. 1996). Ward-Ciesielski (2013) developed a novel intervention targeting suicidal community members who possibly were not engaged in any psychiatric treatment. Suicidal community members were provided a single stand-alone session of DBT-based group treatment. The pilot study found reductions in suicidal ideation and increased use of coping skills in the month following the intervention.

In a somewhat different approach to preventing suicide among high suicide-risk adolescents, King et al. (2009), through the Youth-Nominated Support Team-Version II (YST-II), trained youth-nominated adults in means restriction, suicide warning signs, and crisis resources. Then, the adult checked-in weekly with the nominating, at-risk adolescent to provide hope and support and encourage the adolescent to maintain in treatment. King et al. (2009) conducted a RCT comparing YST-II + TAU to TAU and found that adolescents who made multiple suicide attempts and received YST-II + TAU demonstrated quicker decreases in suicidal ideation post-hospitalization. However, at follow-up, treatment gains did not persist: The control and treatment groups did not differ significantly in suicidal ideation at 6 weeks post-discharge (King et al. 2009).

#### 13.6 Summary

The findings of these various interventions are mixed and suggest that contact interventions and targeted, brief interventions provided in acute care settings may potentially reduce suicidal behavior in the short-term when compared to TAU. However, further study is required to confirm these results.

#### 13.7 Future Directions

Rigorous outcome studies of MBCT-S are needed. Given difficulties engaging and maintaining suicidal individuals in treatment (Lizardi and Stanley 2010, for a review), providing a brief psychosocial intervention at the time and place suicidal individuals present allows for psychoeducation and coping skills training that may otherwise be unavailable or not provided to individuals who need it. A few promising brief interventions exist, but development and testing of additional such interventions and more rigorous testing of the most promising available brief interventions, e.g., SPI, are needed. Meanwhile, an evidence base supporting CT and DBT for suicidal behavior is available. Thus, empirically grounded CT and DBT treatment refinement and empirically supported personalization of treatment, i.e., matching suicidal individuals to specific treatments based on empirical evidence of what works for whom, become the logical next steps in providing efficient and cost-effective psychosocial treatment to suicidal individuals.

Treatment refinement can be informed by dismantling and mediational studies which provide information on treatment components or changes driving treatment gains. Both CT for depression and MBCT to prevent the recurrence of depression among previously depressed patients have been subjected to dismantling studies, with no additive benefit discerned for the defining aspect of either treatment (i.e., training and practice in challenging thoughts and meditation, respectively) (Jacobson et al. 1996; Williams et al. 2013). Active ingredients of DBT, adapted CT, MBCT, or effective brief interventions to prevent suicide among high suicide-risk individuals are unknown. An effort to identify whether skills training, individual therapy, or both are the necessary and active ingredient(s) in DBT, however, is underway (Lynch et al. 2007). Similarly, few meditational studies positing and testing mechanisms of treatment gains among suicidal patients have been conducted. Lynch et al. (2006) posited DBT reduces suicidal behavior and non-suicidal self-injury by increasing mindfulness, including attentional control, and decreasing maladaptive or ineffective emotion regulation. Perroud et al. (2012) recently found increased acceptance without judgment, an aspect of mindfulness, explained decreased BPD symptomatology among DBT participants.

Where meditational or dismantling studies can determine effective components or refine targets of existing treatment, moderational studies may help determine what works for whom. Suicide attempters are a heterogeneous group, with findings from multiple studies showing, for example, differences in trajectories to suicide attempt between individuals with impulsive-aggressive traits and those who are chronically and persistently depressed (Carballo et al. 2008). Though most CTbased interventions, including DBT, CT to prevent suicide attempt and SPI, are somewhat personalized, matching individuals with either impulsive-aggressive traits or pessimistic tendencies, for example, to the most appropriate and likely effective treatment from the outset requires formal study of the effect of these traits on treatment outcome. To date, predictors of treatment response have been investigated in a only a few empirical studies of suicidal populations (Koerner 2013). Verheul et al. (2003) found individuals with more lifetime episodes of NSSI randomized to DBT as opposed to TAU had fewer suicide attempts during treatment. Williams et al. (2013) found individuals who were previously depressed and in most cases had made a lifetime suicide attempt benefited equally, in terms of time to relapse, from slightly adapted MBCT + TAU, 8 weeks of group Cognitive Psychological Education (Williams et al. 2010) + TAU, and TAU. However, participants with more significant histories of childhood abuse and neglect responded better to the addition of MBCT (Williams et al. 2013). Thus, third-wave behavioral treatments, i.e., those that incorporate mindfulness such as DBT and MBCT-S, offered in addition to medication management may be indicated for suicidal individuals with significant histories of deliberate self-harm or childhood adversity, though more studies are needed to determine whether MBCT-S works for acutely suicidal populations before predictor studies of MBCT-S are undertaken. Further, additional predictor studies of DBT and predictor studies of CT for suicide prevention and brief interventions are needed.

#### 13.8 Conclusions

In this chapter, we have outlined longer-term and very brief psychosocial interventions to prevent suicide. We have also reviewed the evidence base for these treatments and suggested directions for future research aimed at providing appropriate, efficient, and thus hopefully effective psychosocial treatment to suicidal individuals.

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